AGRICHEMICAL HANDLING FACILITY (AHF)

Standard (Interim)

Definition

The AHF is a permanent structure with an impervious surface to provide an environmentally safe area for the handling of on-farm agrichemicals, such as pesticides and fertilizers, that are used in spraying operations of orchards, vineyards, and cropland.

Purpose

To provide for the containment and isolation of spillage from on-farm agrichemical mixing, loading, unloading, and rinsing operations in order to minimize pollution of the soil, water, air, plant, or animal resources.

Conditions Where Practice Applies

This standard applies where current methods of mixing agrichemicals and rinsing equipment are polluting or can pollute the soil, water, air, plant, or animal resources.

Considerations

The following shall be considered when designing an AHF:

1. The availability of water and the distance to water sources.

2. On-farm traffic patterns and accessibility to chemical application areas and chemical storage.

3. Adjacent land uses and visibility.

4. The effects of chemical drift on surrounding areas due to prevailing winds.

5. The need for an emergency washing area with a faucet and a shower with a pull chain, for the washing of eyes, face, and bodies in the event of an accidental exposure to chemicals.

6. The need for a loading platfonn to facilitate the filling and/or rinsing of spray equipment.

7. Building architecture and materials should be compatible with the surrounding structures.

Criteria

General

The AHF shall include a watertight containment structure comprising a concrete pad and depressed sump, and all necessary equipment for pumping, transferring, and storing contaminated water. The use of a roof and sidewalls are optional but strongly recommended.

Measures shall be designed to divert runoff from adjacent areas resulting from a 25-year, 24-hour duration storm event.

The AHF shall be located outside the l00-year flood plain and wetland areas.

Access shall be a graveled or a paved ramp with a maximum slope of 15% and a minimum length of 12 feet. All other areas around the pad shall be established with vegetation.

All concrete materials shall comply with the requirements of the ACI 318 Code.

The containment volume for an AHF covered with a roof shall be 125 % of the volume of the largest sprayer tank that will be located on the pad.

The containment volume for an AHF not covered with a roof shall be 125 % of the volume of the largest sprayer tank that will be located on the pad, plus the volume from a 2-year, 24-hour storm event over the entire pad area.

The facility and all components shall comply with applicable federal, state, and local laws and codes.

PAD. The pad shall be a concrete slab-on-grade with a positive slope of at least 2 % (1/4 inch per foot) from all areas toward the sump.

The minimum length and width of the pad shall be sufficient to accommodate the existing or anticipated equipment.

The required thickness and reinforcement of the slab shall be designed for the wheel loads of the existing or anticipated equipment. Design should be based upon methods described in the ACI 360R Code, "Design of Slabs on Grade" or other similar industry guides.

For an AHF without a roof, the pad and sump shall be sealed with a chemically-resistant, non-vapor barrier forming coating to prevent contamination of the concrete surfaces. Surface preparation and coating application shall be according to the manufacturer's recommendations.

SUMP. The sump shall be watertight and constructed of noncorrodible material, and shall be covered with a corrosion resistant grating of sufficient size to allow access for cleaning. The sump shall not be used for storage of spillage or rinsate.

ROOF. The roof, if provided, shall cover dIe entire AHF and shall extend sufficiently to prevent precipitation from accumulating on the pad.

The minimum clearance between the lowest chord of die roof and the highest area of the pad shall provide clear access for the spray equipment and shall not be less than 10 feet.

The roof shall be designed for the minimum loads contained in ASAE EP288.4 " Agricultural Building Snow and Wind Loads."

PUMP. The pump shall be permanently installed and corrosion resistant.

S'IORAGE TANK(S). All storage tank(s) shall be permanently installed and above grade on the pad or on an adjacent pad.

The tank(s) shall be constructed of noncorrosive material (s).

The minimum storage volume of the r.mk(s) shall be no less than the containment volume of the AHF.

PIPING. All piping necessary to transfer contaminated water between the sump, the pump, and the temporary storage tank(s) shall be permanently installed on the pad.

All transfer piping carrying contaminated water shall be completely exposed for its entire length.

All piping necessary to supply noncontaminated water to the pad shall be fitted with backflow prevention devices.

All transfer piping shall be fitted with backflow prevention devices between the pump and the storage tank(s) and between the storage tank(s) and the spray tank(s),

Plans and Specifications

The construction drawings for the AHF shall comply with this standard. The following statement shall appear on all construction drawings for the AHF's:

> " Management of chemicals shall be the responsibility of owner/operater and shall be in accordance with applicable federal, state, and local regulations."

Plans and specifications shall describe the site specific requirements for implementing this practice to achieve its intended use.

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Operation and Maintenance (Interim)

An operation and maintenance plan shall be developed that is consistent with the purposes of this practice, its intended life, and the criteria for its design. And it shall address:

1 Proper disposal/utilization of rinsate, exterior washwater, accumulated sediment, and spillage wastewater in accordance with the pesticide labeling requirements and federal, state and local laws and codes.

2. Winterization of the facilities.

3. Periodic checks of the backflow prevention devices.

4. Inspections of the pad and sump for cracks and leaks.

5. Cleaning the sump and pad between different chemical mixing operations and removal of sediment accumulation from the sump, taking proper precautions to reduce ~rker exposure.

6. Emergency response instructions in case of an accidental pesticide spill, exposure, fire, or other incident that could adversely affect environmental health.

7. Posting of warning signs ttat hazardous chemicals are present.